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## Parapertussis Q and A

### What is parapertussis?

Parapertussis is a bacterial illness that is similar to pertussis (whooping cough) but is typically milder than pertussis. Parapertussis is caused by the bacterium *Bordetella parapertussis*, whereas pertussis is caused by *Bordetella pertussis*. Only *B. pertussis* produces the pertussis toxin (PT).

### How do the symptoms of parapertussis differ from pertussis?

The symptoms of parapertussis include a paroxysmal cough of less than 1 week and a whoop, if present, that persists for a shorter time than that seen in patients with pertussis. Post-tussive vomiting and night coughs occur less frequently with parapertussis than with pertussis. Approximately 40% of cases may be asymptomatic. Very young infants (e.g. <6 months of age) may have a more severe course of parapertussis than older persons.

### How prevalent is parapertussis?

Compared to pertussis, the occurrence of parapertussis is infrequent. According to data from the Wisconsin State Laboratory of Hygiene (SLH), among persons with illness for which culture testing for pertussis was requested during 2003-2004, the percent positive for *B. pertussis* was 6.0% and for *B. parapertussis* was 0.6%.

### What age group can contract the illness?

All age groups can be infected by *B. parapertussis* and experience illness.

### Are the incubation and transmission periods for parapertussis the same as pertussis?

Although data are lacking, it is believed that both illnesses have similar incubation and transmission periods.

### How is parapertussis confirmed?

The SLH confirms parapertussis via culture. PCR testing is not available at the SLH. Since there is no case definition for parapertussis, cases are identified by a positive lab test. All culture requests at the SLH for *B. pertussis* include culture for *B. parapertussis*.

### Can a person be infected with pertussis and parapertussis at the same time?

Yes. However, the signs and symptoms of illness would be more severe due to *B. pertussis*.

**Does DTaP vaccine prevent parapertussis?**

No. There is no cross-immunity between pertussis and parapertussis

**Is parapertussis a reportable disease?**

Parapertussis is not listed as an official reportable disease.

**What is the case management for parapertussis?**

There are no official recommendations/guidelines on case management of parapertussis. However, based on limited data and dialogue with the Centers for Disease Control and Prevention (CDC), it is recommended that confirmed cases of parapertussis be treated to impact the disease severity, especially in infants. Prophylactic treatment of household members to parapertussis should be strongly considered if there is an infant under age 6 months in the household. All infants under age 6 months should receive antibiotic prophylaxis if they have been in contact with a person who has parapertussis.

Limited clinical data on antibiotics suggest *B. parapertussis* is susceptible to both erythromycin and Trimethoprim-sulfamethoxazole (TMP-SMX). However, if the patient was previously treated with clarithromycin or azithromycin, it is not necessary to retreat with erythromycin or TMP-SMX. The dosing and dose schedule for parapertussis are the same as for pertussis. Information about the dosing schedule for pertussis can be found on the Immunization Program web site at:

<http://dhfs.wisconsin.gov/immunization/pertussis.htm>

Lab confirmed symptomatic case patients do not need to be isolated or furloughed from school or work. Prophylaxis for asymptomatic contacts, other than household members when there is an infant under age 6 months in the same household, is not recommended.

Since coinfection of both pertussis and parapertussis is possible and because clinical symptoms of both diseases are similar, any person with symptoms consistent with pertussis should be followed up as a possible case of pertussis.